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THE IMPORTANCE OF COGNITIVE PROCESSES IN LANGUAGE LEARNING

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Abstract: This article highlights the role and significance of cognitive processes occurring in the human mind during the process of language learning. Language acquisition is not limited to memorizing vocabulary and grammar; it is closely connected to cognitive functions such as perception, memory, attention, and thinking. This article discusses how these processes remembering, understanding, using language in context, and responding appropriately during communication take place, and how developing them can lead to more effective language learning. Moreover, methods based on the cognitive approach, particularly techniques such as visual mapping, associations, and logical connections are analyzed for their effectiveness in language acquisition.
Keywords: cognitive processes, memory, attention, perception, cognitive activity, cognitive approach, language competence, communication skills, visual memory.

Cognitive processes are complex mental functions that enable the assimilation, storage, and processing of information, forming the foundation of the learning process. These processes are particularly crucial in acquiring and mastering a language. Cognitive processes include essential components such as memory, attention, perception, problem-solving, thinking, and metacognition. These processes allow learners to acquire new knowledge, apply it in practice, and effectively manage their own learning process.

Memory is considered a central element in the process of language learning. It is essential for remembering vocabulary, grammar rules, and other linguistic conventions. Memory plays a particularly important role in memorizing new words, understanding texts, and recalling previously learned material. Among the different types of memory are short-term memory, working memory, and long-term memory, each of which serves distinct functions in the language learning process. Attention allows learners to focus on the information necessary for learning and to disregard irrelevant or distracting stimuli. The ability to manage attention is especially crucial when reading and analyzing complex or information-dense texts. The capacity to concentrate directly influences how effectively a learner can absorb and process information. Perception helps recognize important linguistic patterns in language learning. This includes the accurate identification and understanding of sounds, words, and grammatical structures. Through the process of perception, learners are able to connect new linguistic elements with their existing knowledge and understand them within meaningful contexts. Problem-solving and thinking are essential for learners to apply the language in practice, communicate in new situations, and analyze grammatical rules. These processes also play a crucial role in identifying and overcoming challenges that arise during language learning.

Metacognitive strategies enable learners to monitor, analyze, and manage their own learning process. Through metacognition, learners assess their level of knowledge, identify their strengths and weaknesses during the learning process, and make necessary adjustments. These strategies allow learners to select and apply effective methods to achieve their learning goals. A deep understanding of the contribution each of these cognitive processes makes to language learning is essential for developing effective teaching methods and optimizing learners' strategies for successful language acquisition. This knowledge enables educators to properly manage cognitive

load during the learning process, provide appropriate support to learners, and enhance their overall learning efficiency.

In the context of academic English, learners are expected to acquire a large amount of vocabulary, often specific to various subject areas. Mastering these words requires not only understanding their meaning but also retaining them over a long period. Learners must firmly acquire this vocabulary so that they can use it correctly in reading, writing, and spoken communication.

Research in Second Language Acquisition (SLA) has shown that effective vocabulary retention is reinforced through repeated exposure and consistent practice. The *spaced repetition* technique helps transfer information from working memory to long-term memory in an efficient manner. This method involves learners reviewing vocabulary at specific intervals over time, which supports the durable storage of information in long-term memory. It is especially effective for retaining abstract or technical terms in academic English, as these words can be difficult to internalize without frequent revisiting.

Furthermore, learning vocabulary by organizing it into semantic fields or categories makes the memorization process even more effective. This approach helps learners acquire new words alongside existing knowledge and related concepts. Learning based on semantic fields takes advantage of the brain's natural tendency to organize information, allowing learners to remember vocabulary more easily by forming connections between words. In this way, students can retain vocabulary more efficiently and recall it more readily when needed.

To strengthen long-term memory and effectively acquire new vocabulary, learners benefit from strategies that promote regular review, contextualized vocabulary learning, and varied practical exercises. These methods facilitate the language learning process and enable students to work more effectively with academic texts. Due to the high demands of academic English, it is essential to apply clear and effective strategies to improve both working and long-term memory. Such strategies help learners acquire academic language more deeply and efficiently. Examples include:

Chunking: Breaking down complex information into smaller, manageable units significantly reduces the cognitive load on working memory. For instance, students can improve comprehension and retention by analyzing long, complex sentences by dividing them into separate subordinate clauses. This process makes it easier to process complex structures and accelerates their practical use.

Mnemonic devices: Mnemonic techniques help learners form associations between new vocabulary and existing knowledge. For example, remembering new technical terms through visual or verbal associations makes them easier to recall. This approach enhances retention because learners link new concepts with what they already know, making the new information more meaningful and memorable.

Spaced Repetition: As previously mentioned, the technique of spaced repetition helps consolidate vocabulary in long-term memory. This method allows learners to reinforce the words they have learned by reviewing them at set intervals over time. It is especially effective for retaining complex subject-specific vocabulary in academic English. When words are revisited at spaced intervals, it becomes easier for them to be stored in long-term memory.

Active Recall: Through self-testing, learners strengthen their ability to remember vocabulary and grammatical rules. Active recall—when a learner asks themselves questions and attempts to retrieve the information from memory—reinforces memory retention. This technique builds a strong foundation for both remembering and accurately using the material, as it activates the memory more effectively.

By applying these strategies, learners enhance their ability to retain and retrieve academic English vocabulary and grammatical structures. As a result, these techniques contribute to improved academic performance in language learning. Therefore, teachers should incorporate these

strategies into instruction and practice activities to effectively support students in mastering the language. In the context of academic English, learners are often required to master technical terminology and complex grammatical structures. Through spaced learning, students can revisit and reinforce such complex information over time, strengthening their knowledge and retention. This approach helps protect learners from the phenomenon known as the "forgetting curve." The forgetting curve demonstrates that newly acquired information quickly fades from memory if not reviewed in a timely manner. Therefore, reviewing material at regular intervals helps learners store vocabulary more firmly in long-term memory. It also protects them from the cognitive burden of repeatedly relearning forgotten words.

A study by Baddeley (2003) explores the role of working memory in learning. Working memory refers to our ability to store and process information simultaneously[1]. This function is especially critical when dealing with complex academic texts. For example, while reading difficult English articles or scientific materials, a learner must retain and manipulate large amounts of information at once. Learners with well-developed working memory tend to perform better in these tasks. Baddeley's research shows that this type of memory significantly enhances the ability to comprehend complex academic content.

Ellis (2006) also investigates the use of the spaced repetition method. According to this approach, information is reviewed over a longer period, but at spaced intervals[2]. This optimizes memorization because the brain becomes more effective at processing and transferring new information into long-term memory. Ellis's study found that learners who used this method acquired academic vocabulary more effectively and used it successfully in their written work. This indicates that repetition and systematic review significantly enhance the memory-related aspects of the learning process.

Analyses conducted with international students at the university highlight the importance of long-term memory in language learning. To strengthen their memory, students employed various strategies such as spaced repetition and active recall. Active recall involves the learner actively trying to retrieve information from memory rather than passively rereading it. By recalling information instead of repeatedly reading it, learners reinforce their memory more effectively. Students who used this technique achieved greater success in mastering academic vocabulary and grammatical structures. The findings of the above-mentioned studies confirm the central role of memory in learning academic English. Memory is crucial not only for receiving new information but also for processing and storing it over the long term. Implementing memory-enhancing strategies improves students' knowledge of academic vocabulary and grammar—both of which are essential for academic success.

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